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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/720,669	SINGH ET AL.	
	Examiner	Art Unit	
	Mitra Tashakkori	2109	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 November 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This is in response to application filed on November 25, 2003, in which claims 1-20 are presented for examination.

Status of Claims

2. Claims 1-20 are pending, of which claims 1, 11, and 20 are in independent form.

Oath/Declaration

3. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

4. The oath or declaration is defective because:

> It does not identify the mailing address of each inventor. A mailing address is an address at which an inventor customarily receives his or her mail and may be either a home or business address. The mailing address should include the ZIP Code designation. The mailing address may be provided in an application data sheet or a supplemental oath or declaration. See 37 CFR 1.63(c) and 37 CFR 1.76.

5. The examiner notes the poor quality of the facsimile transmission of the oath submitted on January 27, 2005. More particularly, the examiner notes the illegibility of the residence addresses and country of citizenship of each inventor. Please ensure this and all other text is clear and legible when submitting the corrections.

Drawings

6. The drawings are objected to because all text labels are not larger than 1/8th" as is required by 37 CFR 1.84(p)(3) and the figure labels are not in compliance with 37 CFR 1.84(u)(1). The text of item 1005 in Figure 10 mentions "ACP ID" without a clear explanation of the meaning in the written description. The text of stage 1110 in Figure 11 should state "as a Transaction Group within a SyncStore" to match the written description. The text of stages 1302 and 1305 in Figure 13 are identical while the written description presents different information, and the text of 1320, 1325 and 1345 do not clearly match the information presented in the written description of each stage. Figure 17 shows generic messages are received from ACP in stage 1710, while the description states adapted messages are received, then converted to generic messages. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 610a, 610b in the description of Figure 6. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

8. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 247 and 295 in the description of Figure 3; 150a and 150b in Figure 4; 525, 530 and 535 in Figure 5; 1250 in the description of Figure 12; 1310 and 1335 in Figure 13. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

9. In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Specification

10. The abstract of the disclosure is objected to because of a typographical error in the second sentence, which currently states *"sent to eh platform needing synchronization."* Also, the last sentence reads "converts the adapted messages them to the original" and should either have the word "them" removed or be otherwise corrected. Correction is required. See MPEP § 608.01(b).

11. The disclosure is objected to because of the following informalities:

12. The use of the trademarks Microsoft®, Windows®, Windows Mobile®, ActiveSync®, Outlook®, .NET™, Palm®, and SYMBIAN has been noted in this application. They should each be capitalized or distinguished with a proper trademark symbol (such as ™ or ®) wherever they appear and be accompanied by the generic terminology.

13. Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any

manner which might adversely affect their validity as trademarks.

14. The term "process" is repeated twice when it should not be (par. [021]).

15. The referenced item "PCP 100" does not appear in the drawing (par. [032]).

16. The last sentence of paragraph [034] reads "interface module to that interfaces the GMSF" and should either have the "to" removed or otherwise be corrected.

17. The description contained in the last sentence of paragraph [045] does not match the content presented in the drawings. The examiner suggests changing "205" to "250" to correct.

18. The referenced modules "610a" and "610b" do not appear in the drawings (par. [058]).

19. Both the settings module and the PCP application interface module are identified using "630" which is not allowed (par. [059]).

20. The use of parentheses within parentheses is improper (par. [063]). A parenthetical phrase inserted within parentheses should be marked using square brackets.

21. The referenced item "query message builder module 680" does not appear in the drawings (par. [066]).

22. The first sentence of paragraph [070] is unclear in meaning.

23. The acronym "GMSP" is used without prior identification of what it stands for in the detailed description (par. [072]). The examiner notes that its meaning is found in the brief descriptions of the drawings; however, the acronym should be identified and explained in the detailed description prior to being used alone. The last sentence of this paragraph reads "AAP process 840 sends synchronization messages to AAP process 820 for execution." This does not match the information represented in the related figure. Also, the reference number "820" has already been used to identify a PAP process, and therefore cannot be used to identify any other item.

24. The first sentence of paragraph [074] reads "stores the fetched data objects by (stage 910) and delta service module" and needs correction.

25. The last sentence of paragraph [076] is missing a period at the end. Also, the phrase "synchronization by and one or more ACPs" needs correction.

26. The first sentence of paragraph [081] reads "if the ACP data objects are all lost to recover the ACP data objects to their last known state is desired" and needs correction.

27. The meaning of the portions of paragraph [082] that read "because the new replica should be the same as the SyncStore data objects" is unclear. The sentence that reads "The previous new replica is reflagged as the old replica" is also unclear. The wording should be modified to convey the intended meaning effectively.

28. The first sentence of paragraph [083] reads "standard delta generation process at stage 915" while the delta generation is only a part of stage 915. The examiner recommends changing

the description to "standard delta generation process of stage 915" for the purpose of clarity. Further, the drawing indicates stage 1250, not stage 915, is being described, which should be noted in the written description.

29. The reference number "915" is used improperly in paragraphs [084] and [085]. The standard delta generation process, according to the drawings, is referenced as "1250" instead, and should be corrected wherever mistakenly identified as "915" in the description. Also, the explanations contained in the last three sentences of paragraph [084] and the first sentence of paragraph [085] are confusing and should be rewritten to clearly convey the process as illustrated in Figure 13.

30. The last sentence of paragraph [089] identifies "QS module 720" rather than "IQS module 720" and should be corrected. The phrase "places the errors entering an ACP outbound queue" is unclear in meaning. Also, there is a reference to "stage 520" that does not appear in the drawings.

31. Appropriate correction is required.

Claim Objections

32. Claims 4, 6, 7, 11 and 17 are objected to because of the following informalities:

33. Regarding claim 4, there is no indication of where in the order of steps the categorizing is performed and whether the limitation *"the data objects"* refers to the objects from an

application in the first platform or to the replicated objects of the second platform.

34. Regarding claim 6, there is no indication of where in the order of steps the grouping is performed and which objects are being grouped. Also, the examiner recommends replacing "data objects" with "the data objects" for the purpose of clarity.

35. The language of claim 7, line 3 is confusing as written. The examiner suggests the following claim language: "an update of one of the data objects of the first transaction group on the second platform fails" or something similar.

36. Regarding claim 11, it does not seem possible for one memory and microprocessor to functionally accomplish all of the recited steps. More specifically, if the memory and microprocessor are located on the first platform, such that the microprocessor could create generic messages and convert them, then that same memory and microprocessor could not exist on the second platform to convert the messages and update the objects on the second platform. In order to advance prosecution, the examiner is interpreting this claim as best understood.

37. Regarding claim 17, it does not seem possible for one memory and microprocessor to functionally accomplish all of the recited steps. More specifically, if the memory and microprocessor are located on the first platform, such that the microprocessor could create generic messages and convert them, then that same memory and microprocessor could not exist on the second platform to convert the messages and update the objects on the second platform. In order to advance prosecution, the examiner is interpreting this claim as best understood.

38. Appropriate correction is required.

Claim Rejections - 35 USC § 112

39. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

40. Claims 1-20 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

41. Claim 1 recites the limitation "the generic messages" in line 9. There is insufficient antecedent basis for this limitation in the claim. There is mention of generic messages created on the first platform and the converted generic messages on the second platform, but this limitation does not clearly indicate which set is being referenced.

42. Claims 2-9 are dependent on claim 1, and are therefore rejected on the same grounds.

43. Claim 7 uses the term "if" which renders the scope indefinite. The scope of the claim is undefined for any case that does not satisfy the conditions set forth by this terminology.

44. Claim 11 recites the limitation "the generic messages" in line 13. There is insufficient antecedent basis for this limitation in the claim.

45. Claims 12-19 are dependent on claim 11, and are therefore rejected on the same grounds.

46. Claim 17 uses the term "if" which renders the scope indefinite. The scope of the claim is undefined for any case that does not satisfy the conditions set forth by this terminology.

47. Claim 20 recites the limitation "the generic messages" in line 13. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

48. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

49. Claims 1-6, 8-16, and 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Multer et al. US 6,694,336 B1 (hereinafter referred to as Multer).

50. Regarding claim 1, Multer discloses "*A method of synchronizing data objects between a first platform and a second platform comprising*" as "a method for transferring data between two devices which require information to be shared between them," (col. 4, line 65) and states more specifically that the intention is to synchronize information between multiple computing

systems (col. 5, line 26). Multer discloses *"creating a set of generic messages identifying changes to the data objects since a previous synchronization"* as a set of self-describing synchronization transactions (col. 12, line 10) that identify changes, i.e. what has been added, deleted, and/or modified (col. 17, line 46), to the data on the first system when compared to the data it knows the 2nd system contains (col. 6, line 8). The vendor-specific application data is converted to a generic or universal format before changes are calculated and transactions are logged (col. 17, line 37). Multer discloses *"converting the generic messages to adapted messages"* as the conversion of the extracted changes into "difference information Δ" which contains the changes and implementation instructions for the second platform (col. 5, line 60). Multer discloses *"sending the adapted messages from the first platform to the second platform"* as the next step in the process, which is to transmit the difference information to the second system (col. 6, line 29). Multer discloses *"converting the adapted messages to generic messages on the second platform"* as the step in which the difference information, having been received by the second system, is interpreted and its data is reconstructed on the second system (col. 6, line 13). Multer discloses *"updating the data objects on the second platform using the generic messages"* as the step in which the second system uses the reconstructed data from the first system to update its own data (col. 6, line 3).

51. Regarding claim 2, Multer discloses, *"The method of claim 1, wherein creating the set of generic messages includes: fetching the data objects from an application in the first platform,"* as a step occurring on the first platform in which application data is gathered and converted to a universal data format (col. 12, line 13). Multer discloses *"comparing the fetched data objects in the first platform with a replica of the data objects in the second platform to identify changes"* as the comparison of the converted application data to "a copy of the device's data at a point just after the previous data extraction and synchronization occurred" contained in an application

object store (col. 11, line 59) in order to determine what changes have been made (col. 12, line 1).

52. Regarding claim 3, Multer discloses, *"The method of claim 2, wherein fetching the data objects from an application in the first platform includes: selecting data objects to be fetched,"* as a step in which the data structure containing the data to be transmitted to the second system is "specified" (col 5, line 57). Further, Multer discloses filtering capabilities to allow for the selection of data based on a field's contents or value (col. 12, line 66) as well as FastSync capabilities that allow synchronization of only application objects that are FastSync compatible. Multer discloses *"fetching only the selected data objects"* as a step in which the first system extracts the information from the "specified" data structure (col 5, line 58). Since synchronization occurs by first extracting application data to be synchronized and then calculating changes made since the last synchronization, as already discussed, then the selection of a specific data structure or the limitation of application objects to be synchronized inherently results in the retrieval of the only selected application data.

53. Regarding claim 4, Multer discloses, *"The method of claim 2, further including categorizing the data objects into a first category and a second category,"* as the a feature of the universal data format discussed above, where this data format includes information "which allows the classification of items and consequently their associated item fields into particular categories," (col. 40, line 25). Multer also discloses the capability of creating collections of data based on whatever arbitrary criteria the user wants to use (col. 27, line 65).

54. Regarding claim 5, Multer discloses *"The method of claim 4, further including wherein creating the generic messages includes: generating generic messages for only the first category of data objects,"* as the ability of a trigger event to only trigger synchronization of a

particular application type (col. 36, line 32). Multer also discloses that a user can make a collection and then synchronize that collection (col. 28, line 1). Given that synchronization is accomplished by generating difference information as previously discussed, the selection of a subset of data for synchronization inherently includes the generation of difference information only for the selected subset.

55. Regarding claim 6, Multer discloses *"The method of claim 2, further including: grouping data objects into a first transaction group and a second transaction group,"* as the grouping of changes based on the data they are related to, and then packaging each group individually (col. 41, line 24).

56. Regarding claim 8, Multer discloses *"The method of claim 1, wherein converting the generic messages to adapted messages includes converting the generic messages to adapted messages based on the requirements of an underlying synchronization software,"* as the packaging of difference information in a format understood by the differencing synchronizer such that it is able to transmit and reconstruct the original data (col. 6, line 27).

57. Regarding claim 9, Multer discloses *"The method of claim 1, wherein sending the adapted messages from the first platform to the second platform includes sending the adapted messages using an underlying synchronization software,"* as a function of the differencing synchronizer as discussed in the above analysis of claim 8. Further, Multer states "the invention comprises a set of programs specifically designed to transmit and/or receive differencing data from one device to another device, irrespective of the type of file system, data, content, or system hardware configuration (col. 5, line 17).

58. Regarding claim 10, Multer discloses *"The method of claim 1, wherein updating the data objects on the second platform using the generic messages includes executing the generic messages so that they act on the data objects of the second platform,"* as the implementation of the reconstructed difference information on the data of the second system (col. 5, line 61). Further, Multer discusses the use of a device engine that "performs mapping and translation steps necessary for applying the data packages to the local format required for that type of information in the application data stores" (col. 11, line 11).

59. Regarding claim 11, Multer discloses *"A system for synchronizing data objects between a first platform and a second platform comprising,"* as "a system [...] for transferring data between two devices which require information to be shared between them," (col. 4, line 65) and states more specifically that the intention is to synchronize information between multiple computing systems (col. 5, line 26). Multer discloses *"a memory"* and *"a microprocessor coupled to the memory and programmed to"* as components of a device to be synchronized (col. 5, line 6) where the system "comprises a set of programs specifically designed to transmit and/or receive differencing data from one device to another device" (col. 5, line 17). Multer discloses *"create a set of generic messages identifying changes to the data objects since a previous synchronization"* as a set of self-describing synchronization transactions (col. 12, line 10) that identify changes, i.e. what has been added, deleted, and/or modified (col. 17, line 46), to the data on the first system when compared to the data it knows the 2nd system contains (col. 6, line 8). The vendor-specific application data is converted to a generic or universal format before changes are calculated and transactions are logged (col. 17, line 37). Multer discloses *"convert the generic messages to adapted messages"* as the conversion of the extracted changes into "difference information Δ" which contains the changes and implementation instructions for the second platform (col. 5, line 60). Multer discloses *"send the adapted messages from the first*

platform to the second platform" as the next step in the process, which is to transmit the difference information to the second system (col. 6, line 29). Multer discloses *"convert the adapted messages to generic messages on the second platform"* as the step in which the difference information, having been received by the second system, is interpreted and its data is reconstructed on the second system (col. 6, line 13). Multer discloses *"update the data objects on the second platform using the generic messages"* as the step in which the second system uses the reconstructed data from the first system to update its own data (col. 6, line 3).

60. Regarding claim 12, Multer discloses *"The system of claim 11, wherein the microprocessor is further programmed to: fetch the d ata objects from an application in the first platform,"* as a step occurring on the first platform in which application data is gathered and converted to a universal data format (col. 12, line 13). Multer discloses *"compare the fetched data objects in the first platform with a replica of the data objects in the second platform to identify changes"* as the comparison of the converted application data to "a copy of the device's data at a point just after the previous data extraction and synchronization occurred" contained in an application object store (col. 11, line 59) in order to determine what changes have been made (col 12, line 1).

61. Regarding claim 13, Multer discloses *"The system of claim 12, wherein the microprocessor is further programmed to: select dat a objects to be fetched,"* as a step in which the data structure containing the data to be transmitted to the second system is "specified" (col 5, line 57). Further, Multer discloses filtering capabilities to allow for the selection of data based on a field's contents or value (col. 12, line 66) as well as FastSync capabilities that allow synchronization of only application objects that are FastSync compatible. Multer discloses *"fetch only the selected data objects"* as a step in which the first system extracts the information from

the "specified" data structure (col. 5, line 58). Since synchronization occurs by first extracting application data to be synchronized and then calculating changes made since the last synchronization, as already discussed, then the selection of a specific data structure or the limitation of application objects to be synchronized inherently results in the retrieval of the only selected application data.

62. Regarding claim 14, Multer discloses *"The system of claim 12, wherein the microprocessor is further programmed to categorize the data objects into a first category and a second category,"* as the a feature of the universal data format discussed above, where this data format includes information "which allows the classification of items and consequently their associated item fields into particular categories," (col. 40, line 25). Multer also discloses the capability of creating collections of data based on whatever arbitrary criteria the user wants to use (col. 27, line 65).

63. Regarding claim 15, Multer discloses *"The system of claim 14, wherein the microprocessor is further programmed to only generate generic messages for the first category of data objects,"* as the ability of a trigger event to only trigger synchronization of a particular application type (col. 36, line 32). Multer also discloses that a user can make a collection and then synchronize that collection (col. 28, line 1). Given that synchronization is accomplished by generating difference information as previously discussed, the selection of a subset of data for synchronization inherently includes the generation of difference information only for the selected subset.

64. Regarding claim 16, Multer discloses *"The system of claim 12, wherein the microprocessor is further programmed to: group data objects into a first transaction group*

and a second transaction group," as the grouping of changes based on the data they are related to, and then packaging each group individually (col. 41, line 24).

65. Regarding claim 18, Multer discloses *"The system of claim 11, wherein the microprocessor is further programmed to convert the generic messages to adapted messages based on the requirements of an underlying synchronization software,"* as the packaging of difference information in a format understood by the differencing synchronizer such that it is able to transmit and reconstruct the original data (col. 6, line 27).

66. Regarding claim 19, Multer discloses *"The system of claim 11, wherein the microprocessor is further programmed to send the adapted messages using an underlying synchronization software,"* as a function of the differencing synchronizer as discussed in the above analysis of claim 8. Further, Multer states "the invention comprises a set of programs specifically designed to transmit and/or receive differencing data from one device to another device, irrespective of the type of file system, data, content, or system hardware configuration (col. 5, line 17).

67. Regarding claim 20, Multer discloses *"A system for synchronizing data objects between a first platform and a second platform comprising,"* as "a system [...] for transferring data between two devices which require information to be shared between them," (col. 4, line 65) and states more specifically that the intention is to synchronize information between multiple computing systems (col. 5, line 26). Multer discloses *"a memory"* and *"processing means, coupled to the memory, for"* as components of a device to be synchronized (col. 5, line 6) where the system "comprises a set of programs specifically designed to transmit and/or receive differencing data from one device to another device" (col. 5, line 17). Multer discloses *"creating*

a set of generic messages identifying changes to the data objects since a previous synchronization" as a set of self-describing synchronization transactions (col. 12, line 10) that identify changes, i.e. what has been added, deleted, and/or modified (col. 17, line 46), to the data on the first system when compared to the data it knows the 2nd system contains (col. 6, line 8). The vendor-specific application data is converted to a generic or universal format before changes are calculated and transactions are logged (col. 17, line 37). Multer discloses *"converting the generic messages to adapted messages"* as the conversion of the extracted changes into "difference information Δ" which contains the changes and implementation instructions for the second platform (col. 5, line 60). Multer discloses *"sending the adapted messages from the first platform to the second platform"* as the next step in the process, which is to transmit the difference information to the second system (col. 6, line 29). Multer discloses *"converting the adapted messages to generic messages on the second platform"* as the step in which the difference information, having been received by the second system, is interpreted and its data is reconstructed on the second system (col. 6, line 13). Multer discloses *"updating the data objects on the second platform using the generic messages"* as the step in which the second system uses the reconstructed data from the first system to update its own data (col. 6, line 3).

Claim Rejections - 35 USC § 103

68. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

> invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

69. Claims 7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Multer in view of Falls et al. US 5,991,771 (hereinafter referred to as Falls).

70. Regarding claim 7, Multer discloses, *"The method of claim 6,"* as is discussed in the 102(e) analysis above, but does not disclose the remaining claim limitations; however, these additional limitations are disclosed by Falls. Falls discloses *"sending a failure notification from the second platform to the first platform if the update on the data object of the first transaction group in the second platform fails"* as an error indicator for transactions that is returned to the caller (col. 24, line 63), where the caller can be another system (col. 13, line 43). Falls also discloses, "Each group of updates associated with a single transaction processor transaction identifier ('PTID') containing [...] a transaction sequence number," (col. 14, line 47). The PTID is used to determine if updates have been missed, one possible indication of an error (col. 15, line 48). Falls discloses *"rolling back all updating of data objects of the first transaction group on the second platform upon the failure notification,"* as a feature of transaction-based synchronization, where an inconsistency found in the changes of a transaction will result in all related changes being discarded (col. 16, line 50). Further, Falls discloses the closing of a transaction causes all updates of that transaction to be applied, and specifies that either all updates are applied or none will be applied (col. 22, line 6). Background information, provided by Falls, tells us, "A transaction is a sequence of one or more operations which are applied to a replica on an all-or-nothing basis. Non-transactional approaches may allow partially completed update operations to create inconsistent internal states," (col. 2, line 25). Multer discloses an embodiment that includes a server that may maintain the transmitted difference information "to allow data on either System A or System B to be returned to a previous state," (col. 6, line 49)

and provides difference information in packages, which are known to include the all-or-nothing characteristic described by Falls. Further, Multer discloses error messages (col. 21, line 35) and synchronization notification (col. 25, line 30) used by the delta generator and the application on the first system. It would be obvious to one skilled in the art to modify Multer to include an error indicator, as disclosed by Falls, to notify the first system that the difference information was successfully transmitted and reconstructed, therefore updating the data objects of the second system. It would also be obvious to one skilled in the art to specify that data be returned to a previous state upon an error, as disclosed by Falls.

71. Regarding claim 17, Multer discloses *"The system of claim 16"* as is discussed in the 102(e) analysis above, but does not disclose the remaining claim limitations; however, these additional limitations are disclosed by Falls. Falls discloses, *"wherein the microprocessor is further programmed to: send a failure notification from the second platform to the first platform if the update on the data object of the first transaction group in the second platform fails,"* as is discussed above in the analysis of claim 7. Falls discloses *"roll back all updating of data objects of the first transaction group on the second platform upon the failure notification"* as is discussed above in the analysis of claim 7. Multer discloses an embodiment that includes a server that may maintain the transmitted difference information "to allow data on either System A or System B to be returned to a previous state," (col. 6, line 49) and provides difference information in packages, which are known to include the all-or-nothing characteristic described by Falls. Further, Multer discloses error messages (col. 21, line 35) and synchronization notification (col. 25, line 30) used by the delta generator and the application on the first system. It would be obvious to one skilled in the art to modify Multer to include an error indicator, as disclosed by Falls, to notify the first system that the difference information was successfully transmitted and reconstructed, therefore updating the data objects of the second system. It

would also be obvious to one skilled in the art to specify that data be returned to a previous state upon an error, as disclosed by Falls.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mitra Tashakkori whose telephone number is 571-272-9069. The examiner can normally be reached on Mon-Thurs 8:30am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Coby can be reached on 571-272-4017. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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MT

Frantz Coby
FRANTZ COBY
SUPERVISORY PATENT EXAMINER